REPLACEMENT SHEET

APPLN. FILING DATE: AUGUST 25, 2000

TITLE: PRODUCTION AND DISTRIBUTION SUPPLY CHAIN
OPTIMIZATION SOFTWARE

INVENTOR(S): SAMARTH SARTHI APPLN. NO.: 09/648,861

SHEET 1 OF 3

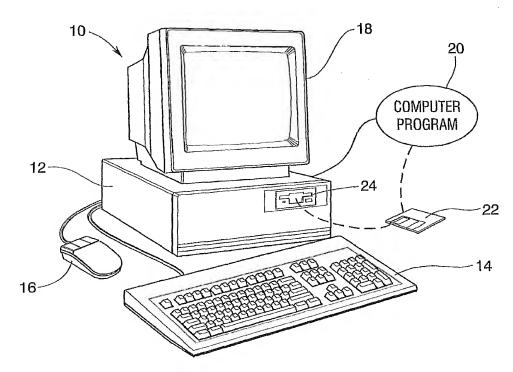
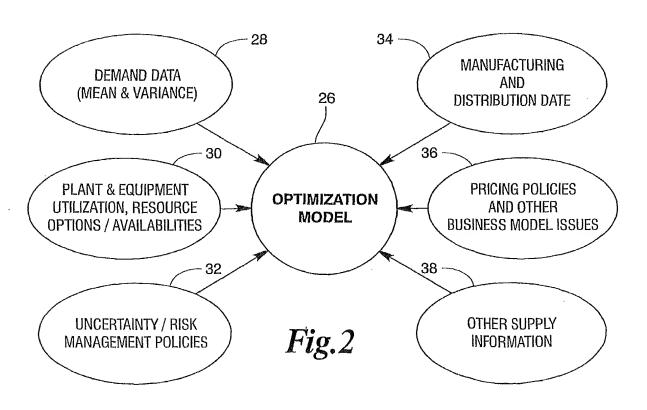


Fig.1

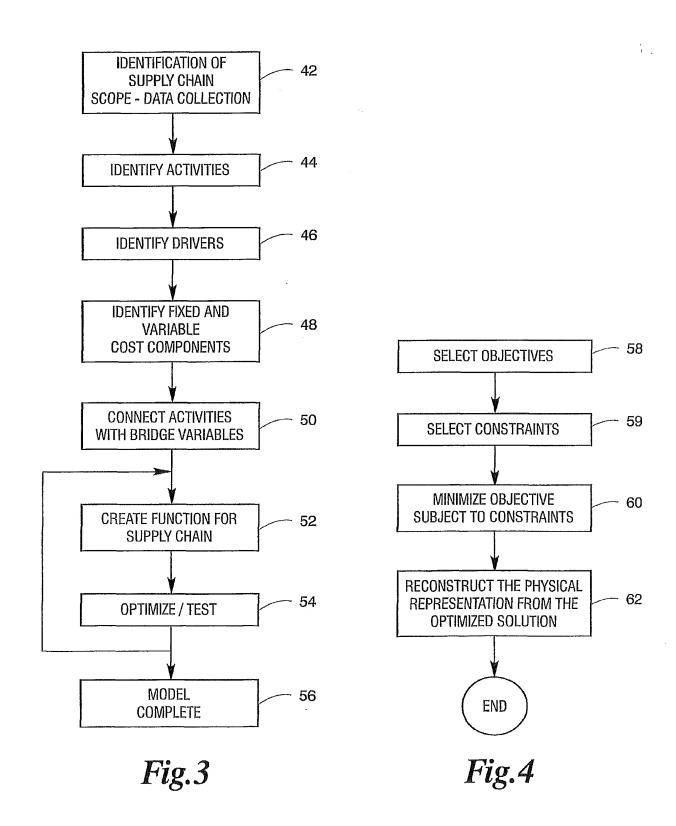


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SHEET 3 OF 3

WHAT-IF INPUTS

- FREIGHT COSTS
- LEAD TIMES
- HOLDING COSTS PER TYPE OF PRODUCT
- STORE DEMAND DATA: HISTORICAL, SEASONAL, **VOLITILITY**
- EXISTING RESOURCES NUMBER OF SUPPLIERS, NUMBER OF DC's, NUMBER OF STORES, NUMBER OF TRUCKS (ASSUMING INFINITE)
- CONSTRAINTS: PRODUCT FRESHNESS, WAREHOUSE SPACE (ASSUMING INFINITE) TRUCK CAPACITY

MODEL 26 **OBJECTIVE:** 

**MINIMAL TOTAL** SYSTEM COST

## **OPTIMAL OUTPUTS**

- ORDER PLACEMENT FREQUENCY
- OUTBOUND DELIVERY FREQUENCY
  - PRODUCE
  - OTHER ITEMS
- OPTIMAL INVENTORY LEVELS
  - AT DC LEVEL
  - AT STORES
- DC STORE ASSIGNMENTS: WHAT DC SHOULD SERVE WHICH STORE CO-OPS?

Fig.5